**K-5 Math Lesson Plan**

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| **Teacher:** Herbin, Tennyson, Harris, Williams | | | **Grade:** 5th | | | **Date(s)**: September 2012 |
| **Unit Title:**  Understanding the Decimal Place Value System | | | | **Corresponding Unit Task:** Lesson 1  2012 Summer Olympics— Who Gets the Gold?  (Teach prior to task 3) | | |
| **Essential Question(s):**  How can I compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons? | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher:**  Computer with Internet Capabilities, stopwatch, Swimming Trials pictures, place value chart, problem solving worksheet, string | | **Student:**  Index card, paper, pencil | | | Compare  Order  Ascending  Descending | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  √ 1. Make sense of problems and persevere in solving them.  √ 2. Reason abstractly and quantitatively.  √ 3. Construct viable arguments and critique the reasoning of others.  √ 4. Model with mathematics.  √ 5. Use appropriate tools strategically.  √ 6. Attend to precision.  √ 7. Look for and make use of structure.  √ 8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  **5.NBT.3b**  Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. (Correlates to NCSCOS Math Objective 1.01) | | | | | |
| **I Can Statement(s):**   * I can record results of comparisons of decimals to the thousandths. * I can compare two decimals to the thousandths based on placement of the digits. | | | | | |
| **Activating Strategy/Hook:** (How will students become cognitively engaged and focused?)  Watch Video on Olympic Swimming Trials. Video Title: [Mia Swimming Olympic Trials 2012.mpg](https://webmail.gcsnc.com/owa/redir.aspx?C=7408be64988841abb629a60cbbc1d848&URL=https%3a%2f%2fgaggle.net%2fgaggleVideoProxy.do%3fop%3dview%26v%3df53fadb49d20b8e05d6e4f820c104ed9) (click the title to view the video)—found at <http://www1.gcsnc.com/gagglelogin.html> , use your GCS username and password (first three of last name, last four of social) to access. Use the swimming results pictures (at end of lesson) to allow students to order times (first picture only). Turn and talk with a partner to discuss who finished in the top three. | | | | | |
| **Teacher Directed:**  Now show the 2nd picture and discuss who the top three finishers were and how students determined their answer.  Given the following set of decimal numbers, guide students to place them in ascending/descending order using either method listed below.   1. **Using a number line to order numbers**   To represent a decimal on a [number line](http://www.mathsteacher.com.au/year7/ch15_linear/01_number/line.htm), divide each segment of the number line into ten equal parts.  For Example:  To represent 8.4 on a number line, divide the segment between 8 and 9 into ten equal parts.  8.4 represented on a number line  The arrow is four parts to the right of 8 where it points at 8.4.  Likewise, to represent 8.45 on a number line, divide the segment between 8.4 and 8.5 into ten equal parts. 8.45 represented on a number line  The arrow is five parts to the right of 8.4 where it points at 8.45.  Similarly, we can represent 8.456 on a number line by dividing the segment between 8.45 and 8.46 into ten equal parts.  8.456 represented on a number line  The arrow is six parts to the right of 8.45 where it points at 8.456.   1. **Lining up decimals to order numbers** | | | | | |
| **Guided Practice:**  Have students run a short distance and time them using a stopwatch. Make note of each student’s time and place that number on an index card and give it to the students.  Back in the classroom, in small groups, students will be guided to place their times on a number line AND in order by decimals.  After sufficient time has been given to complete this task, the teacher will guide a discussion to check for accuracy of the numbers.  The teacher will have students read their time, one by one, and he/she will write it on the board in a random list. (This will allow students to be able to choose from a group of all of the numbers for the independent activity.) | | | | | |
| **Independent Practice:**  Students will choose 8 running times to order on a number line as well as by the decimals individually, making sure to include their time as one of the times chosen. | | | | | |
| **Closing/Summarizing Strategy:**  Students, one by one, will read their number and place it on a large class number line made of string. Students can fold their index card in half and place it over the string in the correct area. (Variations: Clipping index card on string with a clothes pin or paperclip.) If students need to move another students’ running time left or right to fit their time onto the number line, this is okay. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| Reinforce problem solving skills strategies using word problems for ordering numbers (see end of plan). | | | Using the place value chart (end of plan), guide students to place digits in the correct place value area and discuss the ordering process as noted above. | | | Using plastic coins and paper money model decimal numbers. Let students construct decimal numbers using these tools and have them determine the larger amounts. Then guide them to order the amounts in ascending/descending order. Make sure they prove their answer using models, numbers, words, or pictures. |
| **Assessment(s):**  Teacher observations of number (time) placement on the class number line.  Teacher can collect independent practice work to check for accuracy. | | | | | | |
| **Teacher Reflection:** (Next steps?)  • What went well?  • Student understanding/misconceptions.  • Specific notes about students’ thinking.  • What do I need to reteach/review tomorrow or in the future?  • New ideas or changes for next time? | | | | | | |













